VIRGINIA WILDLIFE

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Director's Column

Springing Into the New Year

William L. Woodfin, Jr

Spring. It is a sacred mystery. Who among us knows exactly how the trees awaken and put out leaves sweetly tender and amazingly green? And while scientists have their theories, very good ones no doubt, about the lengthening of days and the earth's magnetic fields, who can really explain how the hummingbirds know when and how to make the transcontinental journey back to the bright red feeders on our front porches? The whole of nature acts in concord and resurrects itself from the numb and ashen months of winter. Every year I am taken, a little, by surprise by the sound of songbirds, the pristine clarity of the sky, the sweetness in the air.

For many of us spring means the start of the spring gobbler season that we have been looking forward to all winter. The bearded monarch is the wiliest thing in the woods and to bag him you must be as canny as he is. Days spent scouting out your ground and hours spent motionless are all worth it when you hear that tom sound off and see him making his way towards you, totally unaware of your presence. It is important, however, that some basic safety measures be taken so that you can enjoy your hunt without unnecessary risks. Wear blaze orange going to and coming back from your site. If you are going to be under a tree, tie a band of blaze orange tape around the trunk a few feet above you. Although the birds can see color they don't seem to notice the colored band; other hunters will, however, and that could well save your life. As always, be sure of your target and beyond before you shoot.

Spring is also the time that sunfish, such as the large and smallmouth bass, crappies and bluegills, move to shallower waters to feed and spawn. In this issue King Montgomery examines the feeding and spawning behavior of sunfish and offers tips on how to find and hook these delectable panfish.

Returning from their wintering grounds in warmer climates, the ruby-throated hummingbirds will be arriving in Virginia in April. Hummingbird feeders are easy to put up and once the tiny birds have found yours they will provide plenty of entertainment as they zoom around, seeming to defy the laws of physics.

One of the most pleasurable activities of spring is planning your summer outings. We are

lucky indeed to live in a state that has so many green and remote places; places where the incessant din of modern life is silenced. An outdoor vacation can give us time to regroup, time to think and to be humbled by the beauty around us. It is also a great way for a family to spend time together and enjoy each other.

Lastly, and unfortunately, spring is tax time. I bring up this unattractive subject only to remind you to check the box on line B on Schedule One on your Virginia State Income Tax Form and donate to the nongame fund which goes to study and protect our nongame wildlife. A small donation can make a big difference. ☐

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Dedicated to the Conservation of Virginia's Wildlife and Natural Resources

VOLUME 59 NUMBER 4

Virginia's Sunfishes

Fish for All Seasons

by King Montgomery

The family that comprises the sunfishes is the second largest freshwater fish family indigenous to North America; the catfishes are the largest. We are fortunate in Virginia that 19 species of these prolific and sporty fishes swim our ponds, streams, reservoirs, lakes, and rivers. The black basses largemouth, spotted, and smallmouth are members of the sunfish family and not true basses at all. The most well-known and angler-friendly of Virginia's sunfishes are the bluegill, crappies, redear sunfish (shellcracker), redbreast sunfish, pumpkinseed sunfish, and the rock bass (redeye), which is also not a bass. Sunfishes get their name for their proclivity to suspend near the surface of the water as if sunning themselves.

During the spring, sunfishes move into shallower water as the days grow longer and water temperatures slowly rise. The sunfishes begin feeding heavily on crustaceans, insects, and smaller fishes. It has been a long winter; they are hungry because the warming water has increased their metabolic rates and they need more food, and the time of spawning is just around the corner.

A Family Affair

Sunfishes spawn in the spring and early summer, and their reproductive behavior is most interesting, primarily because the males, unlike most other fish species, play a major role in the process from start to finish. When the time is right, male sunnies excavate a shallow, generally circular nest, whose diameter is about two to three times the length of the fish. Nests are typically found in water less than five or six feet deep. The nest is cleared by the male with his tail fin. The fish hovers vertical in the water and his tail works like a whisk broom, clearing the redd of any debris. "Redd" comes from the Old English and means "tidy" or "in order."

Gravid females enter the redds, are briefly courted by the males, and

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Top left: The bluegill—so named for the deep blue opercular flap—is the most common panfish caught by anglers. They rise readily to a fly and also attack nightcrawlers or crickets.
Bottom left: These are bluegill redds in water about two to three feet deep. Sunfishes spawn in the spring and into early summer. The males build the nest and guard the eggs and the newly-hatched fry.

select a redd in which to lay their eggs. As the eggs stream from the female, the nearby male fertilizes them with milt. The females leave after their eggs are deposited and retire to rest from the vigor of the spawning act. The males, on the other hand, keep the egg-filled nests clean of choking debris, and chase away other fishes and creatures who would dine on the eggs. This babysitting continues until the newly-hatched sunfishes can fend for themselves. During this time, the males and females feed little, but will attack a lure or fly, probably out of reflex and instinct to protect the redd, the eggs, and the fry.

Habitat—Places to Fish

Find the food and you find the fish. Food hangs onto and around natural and man-made structure such as fallen trees and bridge pilings, respectively. The aquatic food chain begins with phyto- and zooplankton that attach to plants, pilings, rocks, and deadfalls that are in relatively shallow water. Small fishes, crustaceans, and insects eat the plankton and are, in turn, eaten by others. Sunfishes, predators near the top of the food chain, eat those animals and each other. The fish, then, are usually located near "things": bridge pilings, boat docks, rip rap, rocks, brush piles, fallen trees, beaver lodges, and the like.

When the sunnies are not around structure, they will be found in one of two places. They will back away from their fallen tree and congregate near the bottom along the first drop in depth from the structure, the nearest breakline. Or, once the aquatic insects such as the caddisflies, mayflies, stoneflies, and others, begin to hatch into winged duns, the sunfishes, tightly-schooled for protection, rise to pluck the flies from just beneath and on the surface before the flies take wing. Breakline, deeper, and on structure—all three are good options, but the sunfishes' first choice usually is natural and man-made structure that provide the cover and food they need.

Rock bass; illustration by Spike Knuth.

Angling for Sunfishes

In spring, the two best places to fish for sunfishes are in shallow water around the spawning grounds, and near the structure types mentioned above. The sunfishes are very prolific, and catching and keeping a legal limit from the spawning areas in a healthy ecosystem has no deleterious effect on the population. In fact, thinning the bluegills, crappies, and others is an effective management practice on many bodies of water, and is recommended to help control overpopulation and stunting of the fishes. And sunfishes are such great table fare, they are also known as "panfishes," another good reason to keep them. (If you are in doubt about whether to keep fish or not, check with the nearest office of the Virginia Department of Game and Inland Fisheries.)

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You can catch Virginia's panfishes with a cane pole, spincast or spinning tackle, or with a light fly rod. The fishes, particularly in spring, are predictable to find and easier to catch than at other times of the year. Shore anglers, waders, canoeists, and boaters can all do well with the cooperative sunnies. I started my angling career with sunfishes and a cane pole, a length of line, a hook, a bobber, and a piece of shrimp or an earthworm impaled on a hook. I caught a lot of fish. Now I like to use a light fly rod with small nymphs and streamers to catch bluegills, crappies, and shellcrackers. Whether cane pole or custom-made Tonkin cane fly rod, sunfishes are a fish for all seasons and all people.

Crappies school tightly in spring and hang around wood structure such as fallen trees, brush piles, beaver lodges, bridge pilings and, boat docks. They spawn near this structure if they can, usually in deeper water than the other sunfishes and the black basses. If you catch one of these mottled, silver beauties, repeat your cast and you will probably catch more from the same place. The black crappie is more prevalent in Virginia than the white crappie. Black crappies *usually* have 7-8 dorsal spines and the white crappies have 5-6 spines. The dorsal spines are the hard spines of the top fin closest to the eyes.

Crappies, also called specks, speckled perch, and papermouths, are the most piscivorus of the smaller sunfishes; their diet is largely small fishes. For spinfishers, small weighted jigs and tube baits are most effective for catching these fish. I like jig heads of 1/8 and 1/16 ounces with light wire hooks. Since crappies spend a lot of time around and in brush and branches, you will inevitably get snagged now and then. If you use light wire hooks and at least 6 or 8-pound test fishing line, you can often pull the jig free by straightening the hook. Use needle-nose pliers to bend the hook back into shape and continue fishing.

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The redear sunfish ***(left)*** *or shellcracker gets its first name from the red outline of the opercular flap, and the second name from its propensity to dine on water snails and freshwater clams.* ***Above:*** *pumpkinseed sunfish. Find the food and you find the fish. Sunfishes are very prolific, and catching and keeping a legal limit is not hard to do.*

Another hint: re-tie the line to the fly or lure often because the structure will abrade and weaken the line; it will, of course, break on the biggest fish you ever hooked.

Fly anglers can cast small streamers like the Clouser deep minnow in a size 6 or smaller or large trout nymphs such as the prince nymph in sizes 6 and 8. Use a leader tippet testing at

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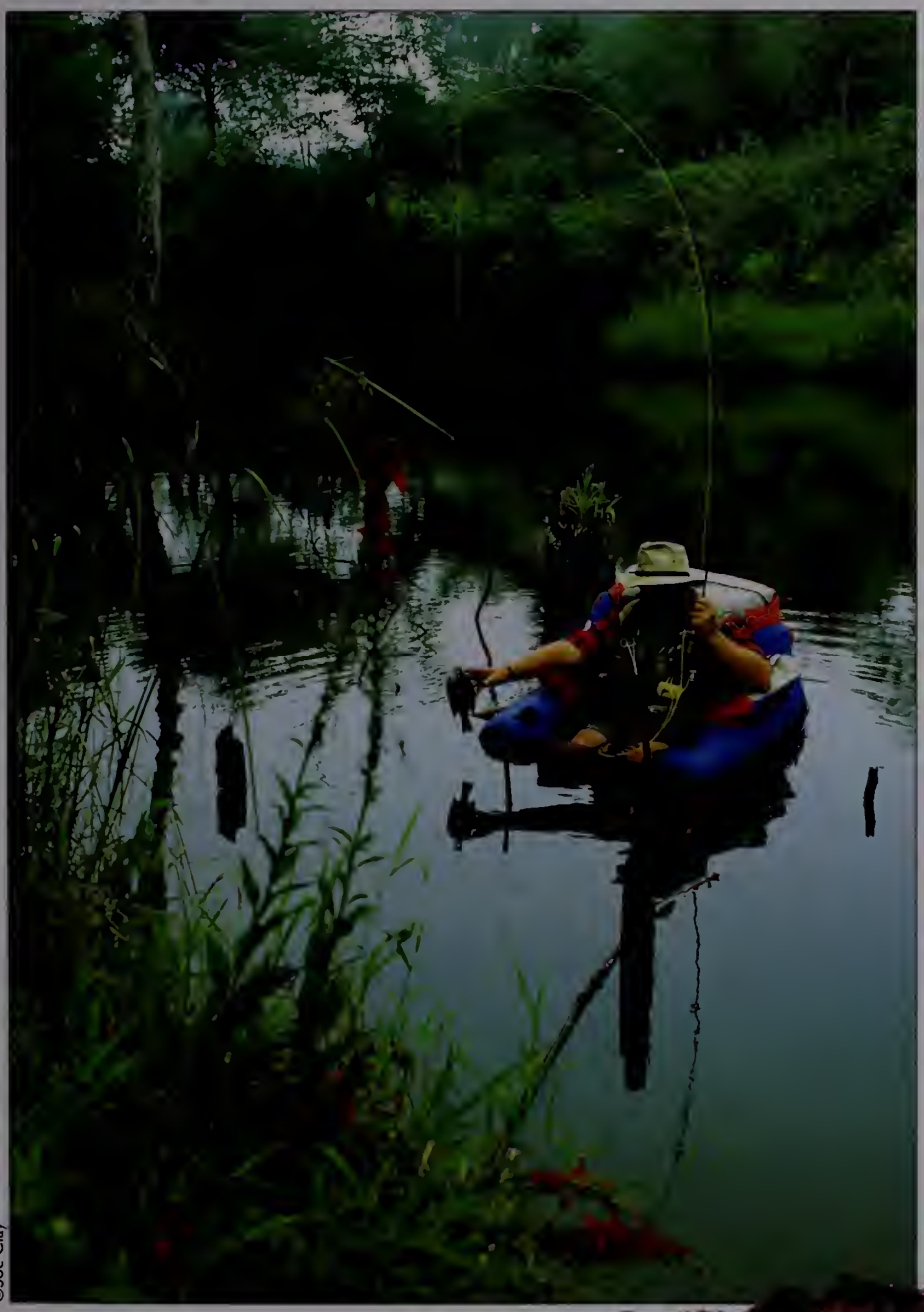
least 8-pounds so you can pull the line to straighten the hook if you get hung up.

Crappies and other panfishes usually take the bait on the fall, so keep a tight line from the time the fly hits the water. Set the hook by gently sweeping the rod to the side. For those who favor a strong hook-set, control yourselves; just raising the rod tip is more than enough. If you strike too hard, the hook will tear through the crappie's paper-thin mouth, leaving you with nothing and the fish with a sore mouth. Bend down the barb on all your hooks; barbless hooks are easier on the fish and make it easier to unhook them.

Bluegills, redbreast and pumpkinseed sunfishes school near shoreline structure and spawn in warm shallows in the spring; they stay shallower than crappies and, once hooked, fight longer and harder than their silver cousins. For these sunfishes, use the same jigs and flies that catch crappies, but in smaller sizes, because these species have smaller mouths. But, unlike crappies who only do so only occasionally, bluegills and their close kin rise readily to top-water lures and flies. This, in my view, is the most fun of all and the fly rod in line weights 2 - 4 is my instrument of choice.

Cast panfish poppers—there are dozens of patterns available—toward shoreline cover along the banks. Let the popper sit for a minute or two, then twitch it ever so gently, and let it rest again. Just when you are about to lose patience, the fish will hit and the fun begins. Often the best retrieve is none at all.

When the top water bite subsides, switch to a weighted trout nymph or small saltwater fly such as a Crazy Charlie or Gotcha in sizes 6 or 8. Back off another half-cast from the shore; the fish might have moved off the bank to the first drop-off and gone deeper. Cast near shore and let the fly sink on a tight line. Strip retrieve to keep it just off the bottom and sweep the rod to the side at the first sign of any resistance. Spinning anglers can take crappie here with the 1/8 ounce jig or small in-line



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spinner, allowing the lures to bump along, just above the bottom.

The redear sunfish or shellcracker, although very closely related to bluegills and the others, are harder to find and catch, and tend to fight harder and longer when hooked. The shellcracker is more of a prey specialist than the other panfishes, and feeds heavily on small clams and water snails, crushing their shells with specialized teeth resembling molars. No, you don't have to use a lure or fly that looks like a snail, because shellcrackers will hit poppers, nymphs, and small jigs, too. In late spring and through summer during evening hatches of aquatic insects, often heralded by swooping swallows, schools of redears roam ponds and bays in lakes and reservoirs, gently rising to the flies just like trout to mayflies. This is a great time to be on the water and just about any fly or lure, surface or subsurface, will catch fish.

Rock bass, like their name indicates, stay close to rocks which protect them from predators, provide ambush points for feeding, and keep them out of the direct moving current; they prefer moving waters like streams and rivers, and are often co-located with smallmouth bass. Also known as "redeyes" and "goggle-eyes," these scrappy sunfishes readily attack small spinners, jigs, plastic grubs, and fly rod streamers and nymphs.

The sunfishes are Virginia's most agreeable gamefishes; they are almost everywhere and relatively easy to catch regardless of age or experience. Angle for them however you prefer, with a $5 cane pole or a $500 graphite fly rod. Use worms, crickets, spinners, plastic grubs, streamers, or nymphs. Get to know Virginia's diverse variety of sunnies; they'll give you a great fishing experience, any way you like it.

King Montgomery, a regular contributor to Virginia Wildlife *and several national outdoor magazines, is a freelance writer with a BS degree in fisheries biology. He lives in Annandale.*

The book used as a reference for parts of this article is *Freshwater Fishes of Virginia* by R. Jenkins and N. Burkhead, American Fisheries Society, 1994. Support for this publication was provided in part by VDGIF. Call (301) 897-8616 for more information or to order.

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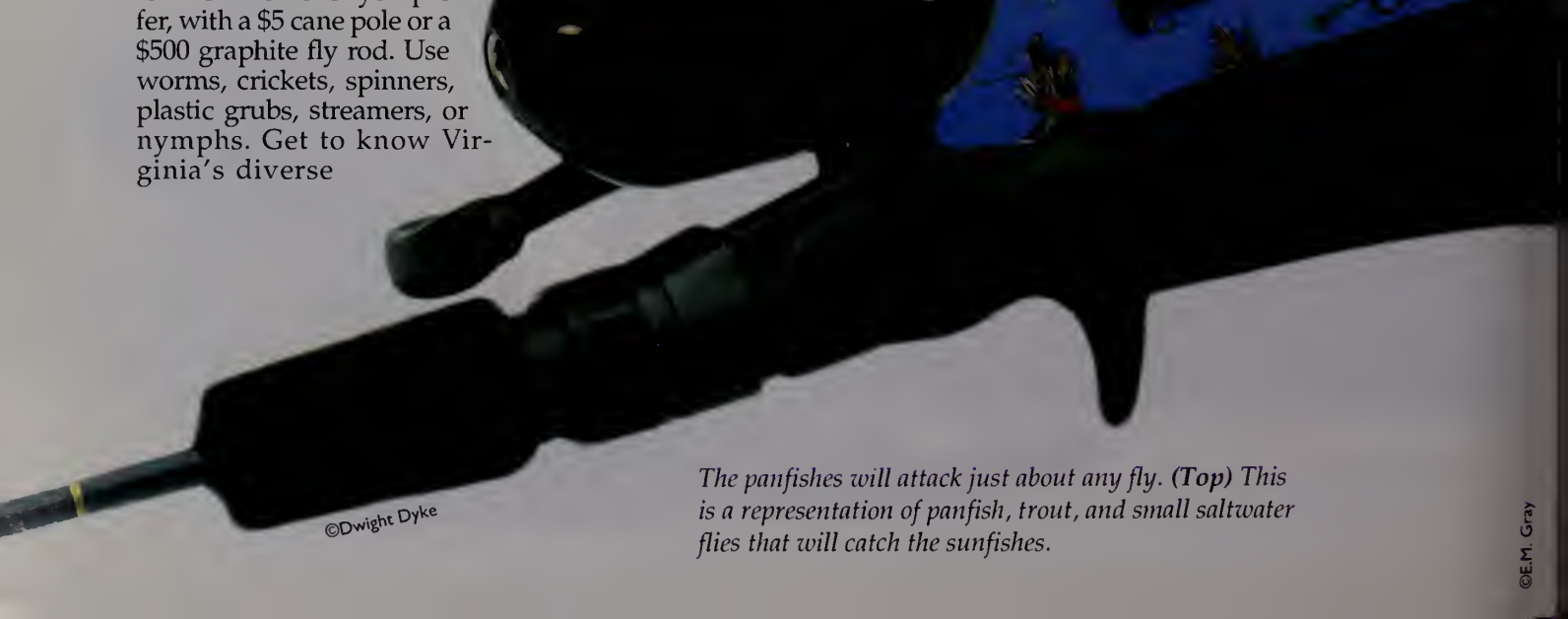

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The panfishes will attack just about any fly. ***(Top)*** *This is a representation of panfish, trout, and small saltwater flies that will catch the sunfishes.*

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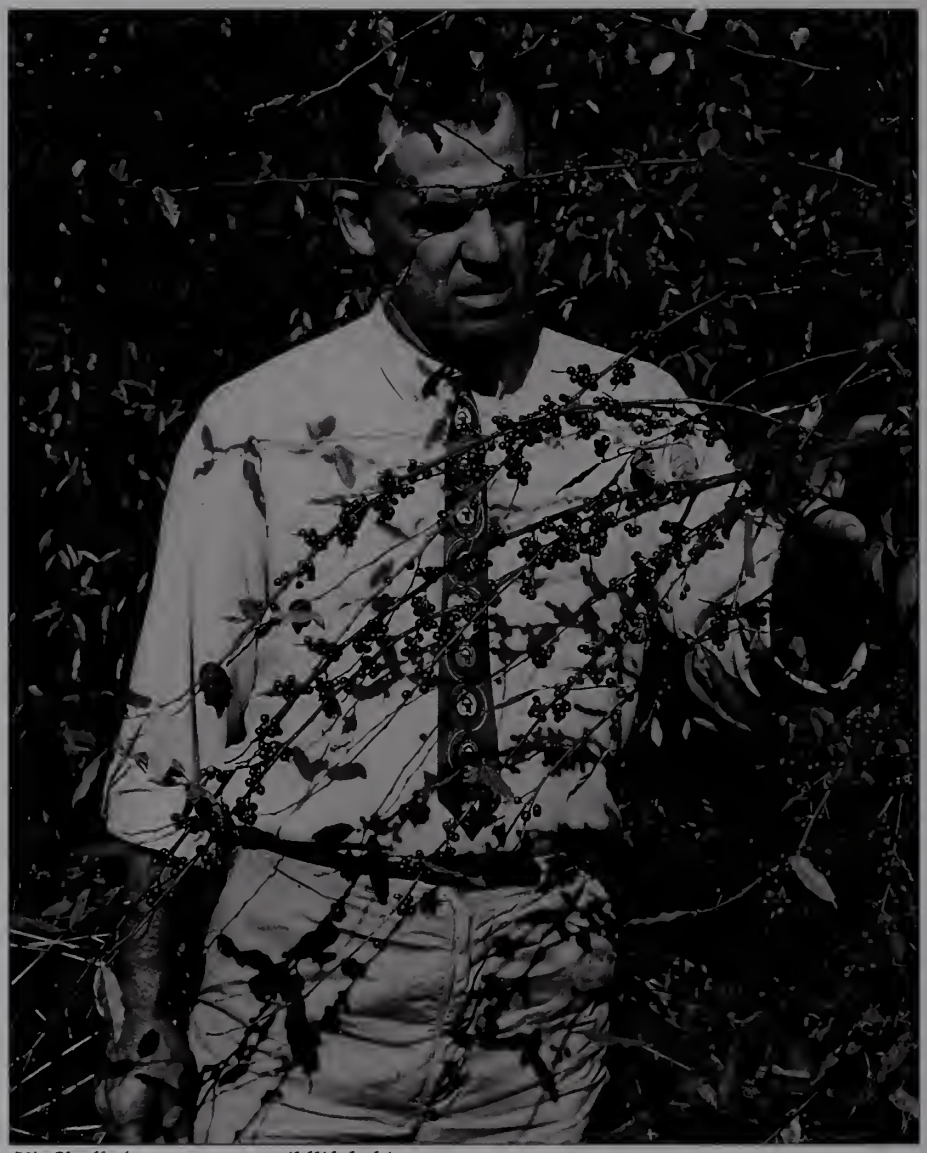
Kit Shaffer

Virginia's Wild Turkey Missionary



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Kit Shaffer's success as a wildlife habitat manager helped to re-establish turkey populations throughout Virginia. Almost 40 years ago he was instrumental in establishing a spring gobbler season.

"From antique stills to snake canes, Kit Shaffer has had a life of collecting memories"

by Emily M. Grey

In December 1979, Kit Shaffer "retired" as game management field coordinator with over 32 years of service with the Virginia Department of Game and Inland Fisheries (VDGIF). A wise person once advised Kit to follow the career path which would continue to benefit him after retirement. He chose the wildlife profession because he found the way of life appealing.

Since his "retirement," Kit has been busier than ever. Nowadays, he spends considerable time giving back to his beloved profession. There is too much trespassing, poaching, littering and sloppiness. To combat these offenses, Kit Shaffer has made it his mission to instruct novices on hunting ethics, safety, sportsmanship and anti-littering. He hopes that his new recruits will teach these important values to others.

Kit Shaffer was born and raised in Somerset County, Pennsylvania. He graduated from Franklin and Marshall College where he played football and earned a Phi Beta Kappa key. After working over five years in industrial management positions in New York, Kit obtained a fellowship at Virginia Tech with the help of a kindly Blacksburg doctor. Kit received a Master of Science Degree in Fisheries and Wildlife Management from VPI. His thesis involved developing techniques in live-trapping raccoons.

When Dr. Henry Mosby became Federal Wildlife Cooperative Unit Leader at Tech, Kit succeeded him as Wildlife District Biologist in Lynchburg. Kit considered this an ideal place to raise his children and pursue his myriad hobbies.

"Historically, the name *Kit Shaffer* has been linked to the establishment and management of wild turkeys in Virginia," states Bob Duncan, VDGIF's Wildlife Division Manager. "This man is a natural storyteller and teacher who draws on years of experience. His sense of humor is his hallmark."

During the late 1800s and early 1900s, the wild turkey had been extirpated from the majority of its former range. Timbering, mining, charcoal manufacturing and poaching had destroyed crucial habitat. Many other states were also faced with the perplexity of how to repopulate this large native game bird.

Game farm turkeys did not have the natural instincts to survive in the wild. Originally, there was no way to effectively capture wild turkeys.

Later, cannon net traps were developed which enabled biologists to live trap and transplant the birds to many Virginia counties. Wildlife biologists learned that a healthy habitat was the key to the wild turkey's comeback. Kit acknowledged that turkeys nest in clear cuts near woodland edges as well as in farmers' croplands. He also noticed that managing for one species also benefits other types of wildlife.

Equipped with a jeep, plow, bush hog and a small budget, Kit began his tour of duty as a farm game biologist. He traveled from door to door from county to county, to civic groups and public meetings in Virginia. He explained intelligibly the data he had collected on wild turkey and quail breeding, nesting, rearing, feeding and other habits.

Kit became acquainted with farmers, forest industry land managers, game wardens and local leaders. In time, he became known as a successful habitat manager, hunter and friend. In Johnny Appleseed fashion, Kit Shaffer planted demonstration food patches for wildlife in different regions of the Commonwealth. He cooperated with the Soil Conservation Service (SCS), 4-H Clubs and cooperative agencies giving free seed and plants to farmers and youth. Gradually, sustainable wild turkey and farm game habitat flourished.

Almost 40 years ago, Kit was instructed to sell a most controversial spring gobbler season to the sportspersons of Virginia. He rationalized that it was not harmful to shoot gobblers in the spring. The hens were capable of nesting and rearing poults without the tom's help. Kit hunted with a governor, board members, foresters and opponents of the proposed season. By showing wild turkeys and their habitats on a personal basis, he could more clearly communicate his position and openly gain confidence and respect from other professionals.

"Everyone who has ever heard a turkey gobble should think of Kit Shaffer," remarks Mitch Forester, Kit's longtime friend and former hunting partner.

©Janet Shaffer

Kit Shaffer's knowledge, hard work and dedication will always be felt throughout the fields and mountains of Virginia.

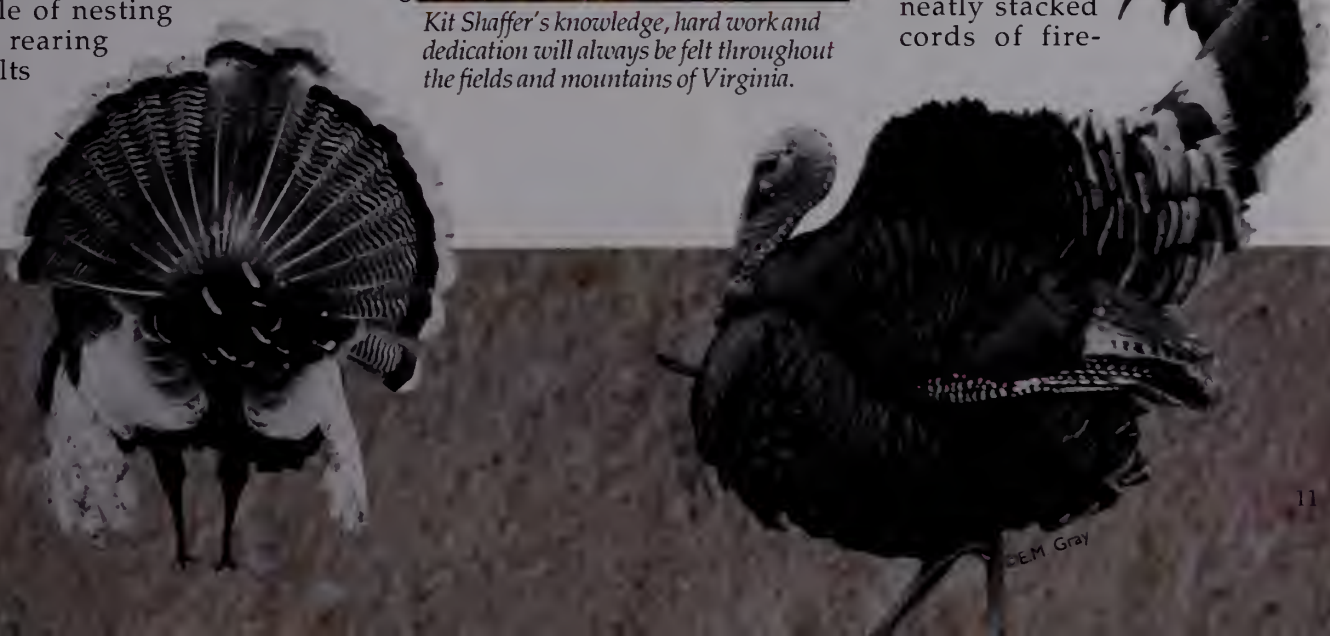
Eventually, a springtime gobbler season evolved. Now, there is both an either sex fall hunt and spring gobbler season in different regions of the Commonwealth.

"Kit was credited with promoting a lot of good will. His photographic memory and gift of humor helped assuage things when discussions heated up," remembers Jack Raybourne, former VDGIF Wildlife Division Chief. "VDGIF was reputed as not acting on a whim. People regarded this agency as one of the few which gave an expedient, well thought out answer."

Japanese honeysuckle, "one of the most cussed about... plants," intertwines with poison ivy and Virginia creeper around the rustic *Mulberry Hill* sign that leads up the hidden, unpaved driveway to Kit's place. This writer first met Kit Shaffer at a BOW (Becoming an Outdoors-Woman) workshop. Informants disclosed that he, his dog Cassie and sidekick, John Byrne, brought down the house. I was eager to learn more about this unusual man.

Cassie, Kit's three-year-old English setter "bird dog made turkey dog," nuzzled my outstretched hand begging for a leftover lunch morsel. Tall, lean and articulate, Kit Shaffer has an excellent memory, keen wit and a mischievous smile. He is exceedingly modest about his wild turkey management work.

A portion of Kit's part brick, part wood home, built circa 1810, was once a slave kitchen. His spacious yard, with six or seven neatly stacked cords of fire-



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wood, is a breathless reminder of a time long ago. His antique museum, an 1850 Swedish-designed chestnut log cabin meticulously pegged together, is a builder's curiosity. The approximately 20-foot high outside chimney is comprised of a stone from every county in Virginia.

Original cobblestones still line the base of an antiquated 50-foot deep well. One can visualize freshly cured hams and bacon hanging from the bucolic smokehouse walls, now adorned with old horseshoes. Nineteenth century cabins, sheds, an art studio and a children's playhouse complete the historical vista.

From a small floating wooden dock on a backwoods lake, Kit catches bluegill, largemouth bass, silver perch and catfish. While angling he often observes beautiful wood ducks swimming and feeding nearby. From the hillside one can also glimpse at the Blue Ridge Mountains and Peaks of Otter toward the west.

"I am not sure that the world has changed for the better. However, today's wildlife biologists are better trained and more sophisticated with computers," he asserts with twinkling blue eyes.

Wildlife paintings, prints and photographs, set in chestnut frames which Kit constructed, decorate the warm, cozy downstairs. The incredible den is a testimonial to Kit's numerous awards, hobbies and collections. Native American artifacts, decoys, indescribable knickknacks and Indian swirled cane sticks that Kit designs embellish bookcases, mantels, nooks and other choice spots. "Thigmatropic Snake Canes" (cane sticks), carved of maple, dogwood, cherry and other tree branches with indentations of reticulating vines, are to be used: *"To lead you into paths of good fortune."*

These marvelous sprigs or some rabbit's—or turkey's—foot has surely blessed Kit with good fortune. This healthy octogenarian wants to live as long as he can. He credits a wonderful wife, good genes, a nutritious diet and frequent daily exercise as contributing to his longevity.

During the last 18 years, Kit has hardly missed a day of the fall and spring turkey hunting seasons and has not carried a gun except once last autumn. A rare touch of flu kept Kit out of commission for two weeks. Determined to hunt one clear November day, he could not find a companion, except for Cassie. He shot one gobbler and donated it to a local family for Thanksgiving.

In a tender story entitled, "The Aesthetics of Turkey Hunting" (*Virginia Wildlife*, September 1981), Kit related a valuable lesson. He learned the true meaning of hunting from his young son. It matters not whether one successfully bags a game animal. The real elation is being outdoors enjoying the astonishing seasonal landscape and a partner's companionship.

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©Janet Shaffer

During the last 18 years, Kit has hardly missed a day of the fall and spring turkey hunting season and in all that time he has not carried a gun except once last autumn.

Finally, we settled down on a comfortable couch in the living room to talk turkey over a Coca-Cola. Through the years Kit has published over 100 articles in various national turkey magazines and in *Virginia Wildlife*. His riveting tales are packed with textbook information and salted with delightful humor. After all, education—and reading—is supposed to be entertaining.

The following abridged, paraphrased story is Kit's favorite:

Nearly 40 years ago, Kit collected various wild turkey data near Leesville Reservoir in Campbell County, Virginia. The State Game Commission was deliberating whether to open a spring gobbler season. While making the rounds, Kit practiced calling in gobblers using different techniques. Imitating great-horned and barred owls and honking the truck horn excited the spring toms. Kit's old wooden easily operated turkey caller or "moron box" often proved successful.

One predawn April morn, Kit heard *three* loud rapid gobbles. Hidden within a cedar-pine blind near a white oak, he sounded the hen-like "cow-cow-cow" yelper. Shortly, the most magnificent heavy-bearded specimen that Kit had ever seen strutted his approximately 22-pound stuff while booming continuously. Kit must have struck a discord. Finally, the ostentatious game bird halted in mid-strut, cocked its head high, folded its accordion-like wings and with a disgusted "putt-putt" disappeared through the woods.

Doc Pugh, "the best turkey hunter in these parts,"after hearing the gallinaceous creature's thunderous rapture, christened him "Old Blabbermouth" (OB). As this impressive, spurred beast's taunting reputation spread, hunters from close-by and faraway tried to bag OB but to no avail.

Kit looked forward to hearing his fowl friend's distinct gobble-gobble-gobble each spring. Secretly, Doc and Kit prayed that no one would usurp their regal gamy hero.

One frigid, rainy, woeful morning, Kit decided to go hunting. About ten years had elapsed since his initial encounter with OB. It was the ninth day of Virginia's spring gobbler season. Camouflaged behind some loblolly pines with his 12-gauge secured against his shoulder, Kit clucked on his turkey wing bone yelper.

"King Turkey" emerged from a patch of dense honeysuckle. The haughty ruler of the roost paraded nonchalantly within 20 feet of Kit's L.C. Smith double barrel. To shoot or not to shoot this protagonist-nemesis? Kit dropped his gun, tipped his rain-soaked cap and shooed OB away!

The following spring, Kit's 11th year anniversary encounter with OB, two new toms sounded off down the ridge. The familiar, peculiar three-note gobble was gone. God's noblest game bird had reigned over his kingdom for 10 years. During that tenure, he had provided countless hours of "tom foolery" recreation for many hunters. He had livened up the forests of Campbell County and had likely sired numerous healthy progeny. A piece of Old Blabbermouth will live forever.

Last September, Kit Shaffer was one of the first individuals to be inducted into the Virginia Wild Turkey Conservationist Hall of Fame. This event was sponsored by the Virginia Chapter of the National Wild Turkey Federation.

Kit Shaffer, thank you, from one of your grateful pupils. Virginia's legacy of wildlife management is richer because of your multifarious contributions. Rest assured that we, the newer members of the wildlife profession, will never forget you. ☐

Emily M. Grey, an attorney, also earned a Master of Science Degree in Fisheries and Wildlife Management from Virginia Tech.

Catesby illustrations courtesy of the Colonial Williamsburg Foundation

Exhibition of Watercolors Highlights Career of America's First Artist/Naturalist

by Curtis Badger

Margaret Pritchard, curator of prints and maps at the DeWitt Wallace Gallery in Williamsburg, likens Mark Catesby to a modern space explorer. Catesby was the first artist/naturalist to document the natural life of the New World, sending thousands of specimens back to England and creating hundreds of paintings that for the first time documented the wondrous plants and animals that populated an unknown world.

Catesby in Virginia

"In 1712, what Catesby did was the equivalent of exploring the moon, of going back home with moon rocks," says Pritchard. "The New World was just as wild and mysterious to people then as the moon is today. The specimens he sent back to England stirred real excitement among scientists and the general population alike. They had never seen such things."

Catesby came to Virginia in 1712 and spent seven years exploring from Tidewater to the Blue Ridge. His time in Virginia, coupled with later visits to the southeast coast and the Bahamas, culminated in the publication of a two volume encyclopedia of natural history that was one of the great achievements of science in the 18th century. *The Natural History of Carolina, Florida, and the Bahama Islands* was illustrated with more than 200 plates etched by Catesby from watercolor paintings he had made of New World plant and animal species. The original watercolors were purchased by King George III after Catesby's death and remained in Windsor Castle until last year, when for the first time they went on view in America in an exhibition titled "Mark Catesby's Natural History of America." Catesby's work was shown in Virginia at the DeWitt Wallace Gallery and is now in Savannah, Georgia at the Telfair Museum of Art until May 10.

For someone who was neither a trained artist nor a trained scientist, Catesby's work has stood up well over the years. While the *Natural History* has its scientific inaccuracies, and although the paintings lack the sophistication of artists such as Audubon, who came a century later, the breadth and depth of Catesby's undertaking continues to amaze. He produced two large folio volumes, plus an appendix, with color illustrations made from copper plates he made himself based upon his watercolor paintings. His pioneering work was based upon his own observations and experiences; there were few previous works to guide him or to provide reference.

Catesby was in a real sense an 18th century field biologist, an untrained but tireless investigator of what he termed the "natural productions" of the landscape. He discovered, for example, that birds migrate. Previously, the consensus had been that birds hibernate, sleeping away the winter in hollow trees or in the mud of lowland bogs.

Catesby did not consider himself an artist, but he had a way of making his subjects come to life. He was the first to show a bird or animal in its natural environment. He painted a bald eagle taking a fish from a river (the James?) with an American Indian in a log canoe in the background. An American redstart is shown in a black walnut tree. A titmouse is depicted with honeysuckle and little yellow star-flower. His birds are feasting on berries and scolding intruders; they are not simply biological specimens.

The Virginia Years

Catesby was born in the county of Essex, England, to Elizabeth and John Catesby, a prominent lawyer. While his formal education was apparently limited, he had a great interest in natural history and studied with some of the leading English naturalists of the day, including his maternal uncle, Nicholas Jekyll, and John Ray, who devised a system of plant classification.

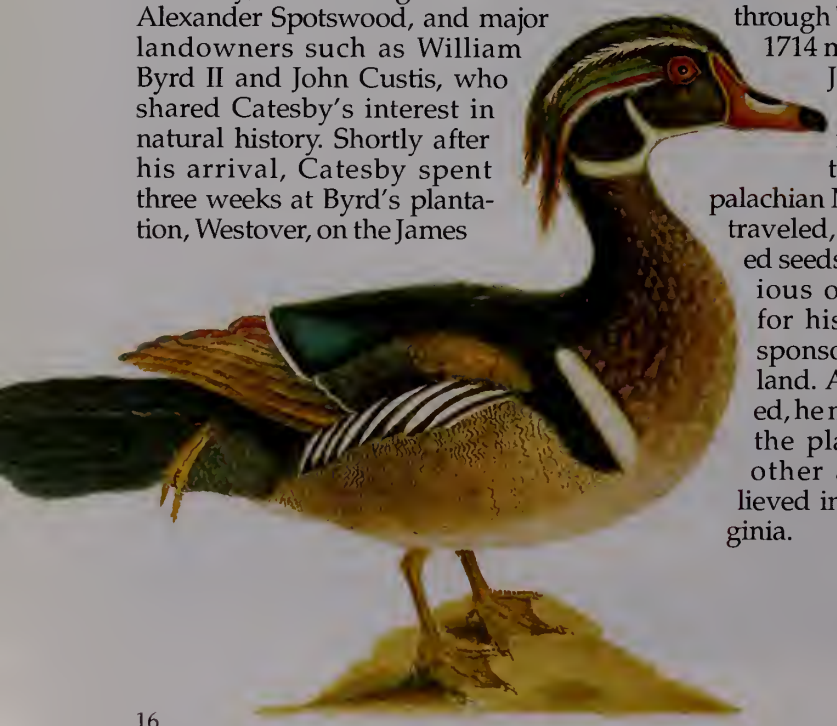
Catesby was the first artist to show birds and animals in their natural environment. ***Above:*** *bald eagle taking a fish from the James River;* ***below:*** *wood duck;* ***right:*** *blue heron.*

Catesby's sister, Elizabeth, married Dr. William Cocke, a physician who had come to America and settled in Williamsburg. In 1712, at age 30, Catesby traveled to Virginia to visit his sister and to collect botanical specimens for his associates back in England. The visit lasted seven years.

When Catesby arrived in Williamsburg the city was the governmental and cultural center of Virginia, and through his brother-in-law he met the political leaders of the day, including Governor Alexander Spotswood, and major landowners such as William Byrd II and John Custis, who shared Catesby's interest in natural history. Shortly after his arrival, Catesby spent three weeks at Byrd's plantation, Westover, on the James River, working on the great garden there. Later he went with Byrd on a trip to the Pamunkey River, where he first met the American Indians of the region.

Catesby had free run of most Tidewater plantations and he often took advantage of the hospitality of his circle of well-connected friends.

He traveled extensively through Tidewater, and in 1714 made a trip up the James River to the headwaters, visiting for the first time the Appalachian Mountains. As he traveled, Catesby collected seeds, plants, and various other specimens for his associates and sponsors back in England. And as he collected, he made drawings of the plants, birds, and other animals he believed indigenous to Virginia.



Catesby was a self-taught artist and naturalist, and his seven years in Virginia provided invaluable field experience, an opportunity to develop a system of drawing and collecting that would serve him well when he began compiling his "Natural History."

His experiences in Virginia also bolstered Catesby's reputation back in England. Gov. Spotswood sent seeds collected by Catesby to Henry Compton, Bishop of London, for the garden at Fulham Palace. Catesby sent packets to his brother and to Samuel Dale and Thomas Fairchild, both well-known English naturalists. Soon Catesby's adventures in Virginia began to be documented in natural history periodicals back in England.

When Catesby returned home in 1719, he must have met with something of a hero's welcome from the prominent naturalists of the day. The drawings of birds and plants he brought back from Virginia generated a great deal of interest, and soon a group of British naturalists were making plans for Catesby to return to America.

Catesby's old friend, Samuel Dale, praised his work to Dr. William Sherard, a prominent naturalist. Sherard, in turn, enlisted the support of Francis Nicholson, the first royal governor of South Carolina, as well as Sir Hans Sloane, author of *A Natural History of Jamaica*, and Charles Dubois, treasurer of the East India Company. These men, as well as a group of wealthy amateur naturalists, pledged financial support for a second Catesby voyage to America.

The financial backing given Catesby was not provided without certain expectations, primarily that the sponsors would receive regular shipments of seeds and other natural specimens. Catesby arrived in Charleston, South Carolina on May 3, 1722, and as he did in Virginia, he used his political connections to provide access to the plantations of the Low Country.

Unlike his time spent in Virginia, however, Catesby's mission in Carolina was more defined, more urgent. His pattern of casual exploration had given way to a need to systematically collect and document. In six weeks he covered 40 miles north of Charleston, and then made a similar trip to the south. Increasingly, he found it difficult to satisfy the demands of his patrons for seeds and specimens while drawing and painting for his own purposes.

Catesby spent two years in South Carolina, then became convinced that further work there would only duplicate earlier efforts. He proposed to his English patrons a trip to Mexico, but was turned down. Instead, he sailed to the Bahamas, where he added fish and other marine animals to his subject matter.

Catesby returned to England in 1726, concluding what had been a remarkable 14-year career as a field naturalist. The remainder of his life would be spent organizing his field work into the two volume "Natural History," a project that would provide him—if not fortune—then certainly a fair amount of fame.

The Natural History

Catesby had collected well over 200 watercolors he had made of birds, plants, animals, fish, and reptiles in North America, along with detailed field notes. His sponsors and friends were very impressed with the collection and thought it worthy of publication, but the cost of hiring professional engravers to make copper plates for the press was prohibitive. His sponsors were unwilling to provide financial backing, and Catesby, after 14 years of wilderness travel, had no money.

Catesby had learned natural history on his own, as well as painting, so he decided to add a third self-taught discipline, printmaking. Catesby made plates by covering the metal with a wax-like medium, and then scratching an image in the wax with a sharp stylus. The plate was then put into an acid bath, and the copper which had been exposed by the stylus was chemically etched.

Catesby learned natural history on his own, as well as painting. ***Above:*** *gray squirrel;* ***Right:*** *mocking bird.*

Catesby illustrations courtesy of the Colonial Williamsburg Foundation.

Catesby came to Virginia in 1712 and spent seven years exploring from Tidewater to the Blue Ridge before returning to his home in England. ***Above:*** *crested jay.*

When the etching was completed the wax was removed, ink was applied to the plate, squeegeed off, and the plate was pressed onto a sheet of printing paper. Ink would have remained in the etched lines, and when pressed against the paper a printed image resulted.

It was a time-consuming process, one that took a great deal of work to perfect. Remarkably, in Catesby's Natural History, all but two of more than 200 images were engraved by Catesby from his own watercolor paintings. The images were hand colored by colorists working under Catesby's supervision.

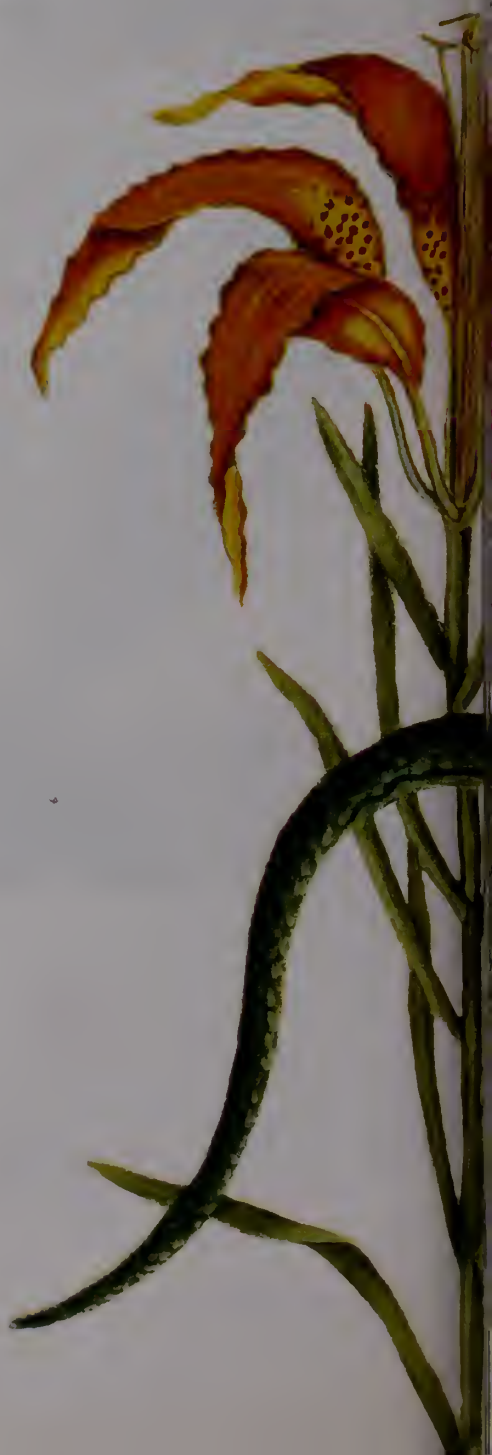
Catesby was not a wealthy man, and even by doing the engraving himself, he still needed income to support himself. He worked for a time in various gardens, and then he began selling sections of twenty images of the Natural History as they became complete. The subscription method of sales, used later by Audubon, enabled Catesby to devote full time to the production of plates and prints.

The entire two-volume-plus-appendix edition of the Natural History took two decades to complete, and its incremental publication sealed Catesby's reputation as a leader in the world of science. He was elected to the Royal Society in 1733 and published numerous natural history essays, including "Of Birds of Passage" in 1747, in which Catesby explored his migration theories.

Although Catesby never returned to the Americas, he kept in touch with botanists who had Virginia connections, including John Clayton. Catesby corresponded with Clayton and forwarded specimens sent by him to J.F. Gronovius in the Netherlands for publication in *Flora Virginica*.

Catesby married his long-time companion, Elizabeth Rowland, in October 1747, and spent his last years with her in London. He died on December 23, 1749, leaving his widow very little in material possessions other than a few unsold copies of the "Natural History" and the original watercolor paintings. These were sold, and the proceeds afforded her a modest pension.

The complete bound set of original watercolors was purchased from a bookseller by King George III in 1768, extending an interest in Catesby's pro-



ject by two generations of the Royal Family. The first volume of the set was dedicated to Queen Caroline, an early patron of the series. The second volume was dedicated to Caroline's daughter-in-law, Augusta, Princess of Wales.

For more than two centuries the Catesby paintings have been held by the Royal Family, first at Buckingham Palace and more recently at the Royal Library at Windsor. Their return to America not only provides our generation a look at nature as it was during the times of the colonists, but it also renews an appreciation for a self-taught artist and naturalist whose work opened the eyes of the world to the wonders of the new America. □

Curtis Badger is a freelance writer who lives on Virginia's Eastern Shore.

Top: *red-headed woodpecker;*
above: *water snake.*

Catesby illustrations courtesy of the Colonial Williamsburg Foundation

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Hidden in the Shadows

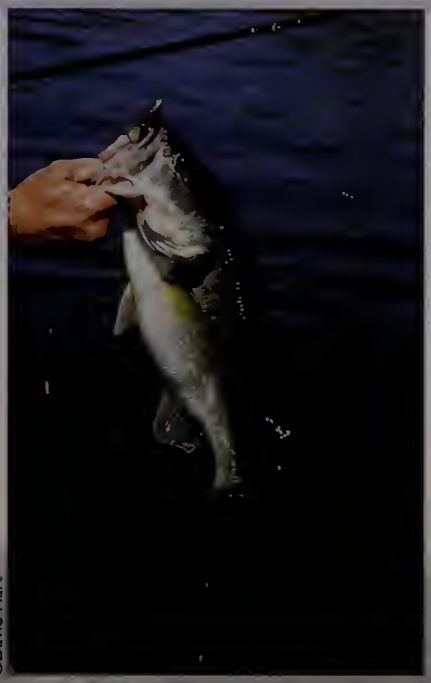
by David Hart

Listen...

Hear that? Neither do I. It's silence. It's silence broken only by the distant caw of a crow, or the raucous honking of a flock of resident Canada geese. Or maybe it's silence broken by the splash of a lure falling on the edge of a shoreline grass bed and the plastic click of a reel. Unfortunately, it's a sound anglers are hearing less each time they head to one of our sprawling reservoirs.

As more people discover the pleasures of Virginia's cool, clean water, our lakes and rivers are becoming crowded. Sometimes, too crowded. Mega-motored bass boats roar up and down the lake looking for the perfect spot. Water skiers, personal watercraft users and pleasure boaters seem to choke every sheltered cove. The noise is endless and the constant pitching from waves pushed up by passing boats is enough to make you seasick.

Anglers who seek quiet—one of the main reasons so many of us take up fishing—are finding it in fewer places. Weekdays, rainy afternoons, and chilly mornings are the few times we don't have to compete for space on the open water.



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Walleye and largemouth bass are just a few of the different specis that await anglers in the numerous smaller lakes found throughout Virginia. Background photo ©David Hart.

The small public waters scattered across the state lack the vast, open water of our larger reservoirs, but in many ways, that's ideal.

Thankfully, there is a way to escape the constant barrage of boat wakes and the never-ending whine of personal watercraft. In fact, it's relatively easy to find the solitude we crave.

Small lakes, particularly the ones that prohibit gas-powered motors, are ideal places to find peace, as well as an abundance of fish. These little jewels are far from secret, but so many anglers simply blow by them as they trailer their big bass boats to the nearest open water. In fact, every Virginian who tows a boat to one of our huge reservoirs has a small, fish-filled reservoir waiting quietly nearby.

Northern Virginia anglers live within a thirty minute drive of the Potomac River and about an hour-and-a-half from Lake Anna. Both are superb bass waters, and both are great places to find excellent crappie and striped bass fishing. But they can be a nightmare to fish, particu-

larly in the spring and summer when hordes of people head for the water and bass anglers cast a lure to every stick poking above the surface. My friends and I often spend as much time looking for a quiet place to wet a line as we do actually fishing.

That's why I've become fond of Burke Lake. This 218-acre Department of Game and Inland Fisheries-owned reservoir is smack in the middle of the suburban sprawl of Fairfax County, but after I ease away from the boat ramp, I can't tell. Wood ducks, mallards and Canada geese skim through the shoreline vegetation, broods in tow. If I get on the water early enough, I'll usually catch a glimpse of a beaver making one last inspection of his territory before calling it a night.

Sure, Burke Lake can jam up with pleasure boaters working on a perfect suntan and flotillas of rowdy high school kids on a sunny Saturday in the spring. But most of them aren't fishing and none of them are waterskiing. Electric motors silently push boats across the lake and the squeak of oar locks adds to the mix of pleasant sounds drifting across the water. I usually encounter only a few serious bass fishermen in a typical day on the Burke. The rest are dunking worms for panfish or watching a bottom rig in anticipation of a catfish. And when the sun settles below the trees on the western shoreline, Burke becomes deserted. It's just me, my boat, my friends and the fish.

How good is the fishing in the small lakes scattered across the state?

John Odenkirk, VDGIF fisheries biologist in Region V, Northern Virginia, describes the bass fishing in Burke Lake and Fauquier County's Lake Brittle in one word: phenomenal.

"We catch so many quality bass out of Burke," he said. "I'm just amazed at the numbers of big fish. Brittle is also loaded with big bass and walleye."

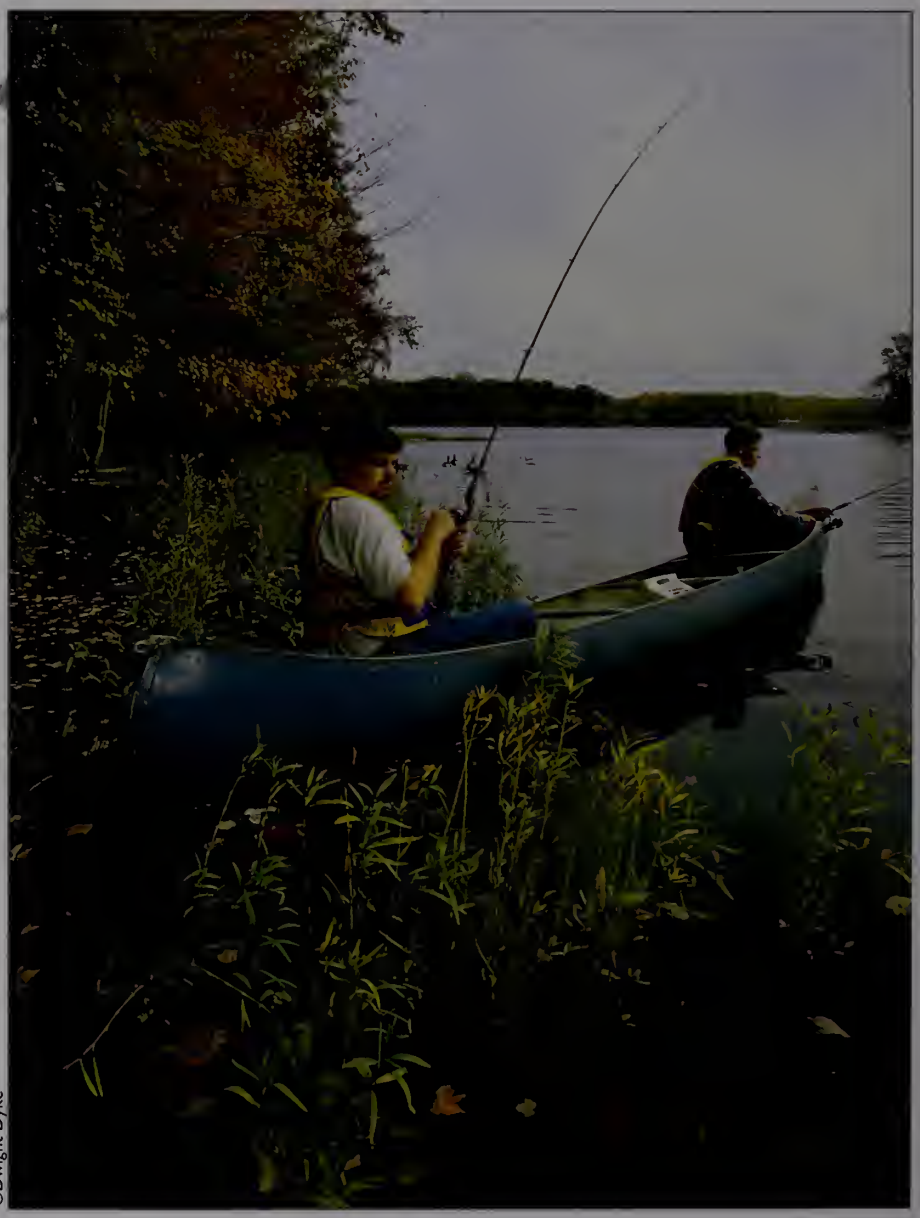
Sampling efforts, conducted by electro-fishing, turn up an incredible number of good-sized bass, not only at Burke, but at other small lakes throughout the region. In fact, of seven lakes surveyed in Region V last year, Burke was at the top in terms of catch per unit of effort of preferred fish (CPUE-P). That translates to the number of "preferred" bass (15 inches or bigger) biologists collect in one unit of effort of sampling. In this case, "one unit of effort" is one hour of electro-fishing.

Odenkirk and his colleagues captured 32 bass in Burke, 18 in Lake Brittle, 13 in Orange and 12 in Curtis in one hour of sampling. All of those lakes, by the way, restrict boaters to electric motors only.

Also astounding was the relative stock density of preferred fish (RSD-P) in these little reservoirs. That means the number of bass over eight inches that are also at least 15 inches. Simply put, the higher the number, the larger the percentage of the population is composed of big bass.

Burke Lake had a RSD-P of 40; Brittle's was 28 and Lake Curtis was 33.

Although it's not really fair to compare them, noted Odenkirk,



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Less than an hours drive from Washington D.C. in Fairfax County is Burke Lake. John Odenkirk, VDGIF fisheries biologist for Northern Virginia, describes the bass fishing here as "phenomenal."

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Virginia's Quietest Bass Lakes

Small Department-owned lakes offer peace, as well as great fishing. Gas-powered motors are prohibited on many of them; others restrict boaters to small outboards. Most have bank-fishing opportunities and just about all of them have concrete or gravel ramps suitable for full-size bass boats. And thankfully, personal watercraft and water skiers are prohibited.

Here's a look at a few of them:

Burke Lake (Fairfax County)

This 218-acre lake has an incredible bass population, as well as a first-rate muskellunge and walleye fishery. Trophy-sized fish of all three species are caught regularly. Biologists admit panfish opportunities are only fair, however.

Lake Brittle (Fauquier County)

At 77 acres, Brittle is a small lake, but offers great fishing for bass, catfish and walleyes. Like Burke Lake, the bluegill and crappie population is only fair, thanks in large part to an abundance of gizzard shad. Boaters are restricted to electric motors.

Lake Frederick (Frederick County)

This gin-clear, 117-acre lake has an excellent bass population, thanks to a 12- to 18-inch slot limit. The lake also has walleyes, catfish and sunfish.

Lake Orange (Orange County)

Bass fishing is considered very good and bluegill are abundant in this 124-acre lake. Walleyes up to eight pounds are caught and catfish populations are considered good. Gas-powered motors are prohibited.

Nottoway Lake (Nottoway County)

Located just north of Blackstone, this lake has a lot of standing timber, which offers superb habitat for largemouth bass. A 12- to 15-inch slot limit has helped the bass population grow to a larger average size. Boaters are restricted to 10-horsepower motors.

Lake Burton (Pittsylvania County)

Tucked away deep in the woods near Chatham, and only a short hop from busy Smith Mountain Lake, this 76-acre reservoir has a great largemouth bass population. Biologists have also found crappie up to three pounds and catfish up to 12 pounds.

Briery Creek Lake in Prince Edward County has gained national attention for producing big largemouth. Bass in the 10 to 15 pound class are not uncommon. Above photo ©Dwight Dyke.

For more information on Virginia's smaller lakes write for a free copy of "Virginia's Freshwater Fishing Guide," Virginia Game Department 4010 West Broad Street, Richmond, Virginia 23230-1104.

Lake Anna's CPUE-P was 6 and its RSD-P was 33.

"It's tough to get a high CPUE on large, clear lakes because the fish are sometimes deeper and they are tougher to capture," he said. "Don't think Anna doesn't have a lot of bass because its catch per unit of effort is low. That's not true at all."

What is true, he stressed, is that our smaller reservoirs are loaded with bass, although they can be a challenge to catch.

"One of the biggest reasons the bass in some of our smaller lakes are hard to catch is because of the high population of shad," noted Odenkirk. "With so much food available, the bass can be choosy about what they eat."

Those lakes in the northern region aren't isolated cases, either. Connor Lake, a 110-acre Department-owned reservoir in Halifax County, gained instant recognition after it surrendered the current state record largemouth bass to Richard Tate back in April, 1985. That fish weighed an astounding 16 pounds, 4 ounces.

And 845-acre Briery Creek Lake, in Prince Edward County, has garnered national attention by turning out one gargantuan bass after another. The big lakes that attract so many anglers simply can't offer the same odds of hooking a big bass that Briery Creek can.

Dan Wilson, fisheries biologist for Region II, said his area is loaded with "sleeper" lakes. One of the more notable ones is 157-acre Lake Gordon, located in Mecklenburg County.

"It gets some bank fishing pressure and a few people put boats in now and then, but because big favorites like Lake Gaston and Buggs Island are close by, it gets very little fishing pressure," he said.

The bass in Gordon are growing to respectable sizes, too. According to data gathered by Wilson, 36 percent of the bass are over 15 inches and 7.5 percent were over 20 inches.

These small lakes may throw big water bass anglers for a loop. If the fish are playing hard to catch, you can't fire up the 200-horsepower Mercury and race to the other end of the lake. But the truth is, you don't need to. These little lakes are full of fish, and a patient—and skilled—angler can catch them. □

David Hart is an outdoor writer for various Northern Virginia papers.

Virginia's Quietest Bass Lakes

1. Burke Lake (Fairfax County)
2. Lake Brittle (Fauquier County)
3. Lake Frederick (Frederick County)
4. Lake Orange (Orange County)
5. Nottoway Lake (Nottoway County)
6. Lake Burton (Pittsylvania County)

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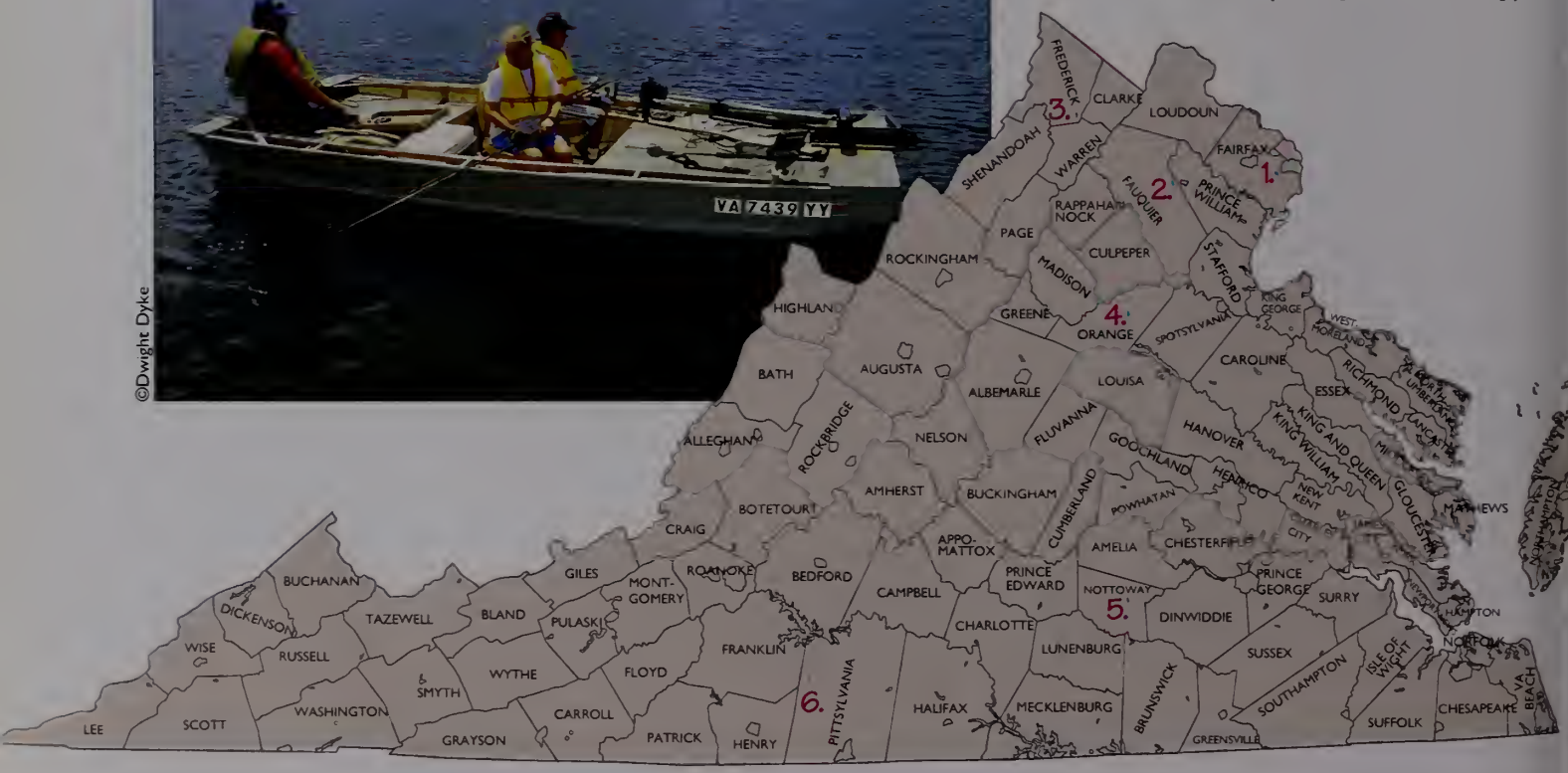
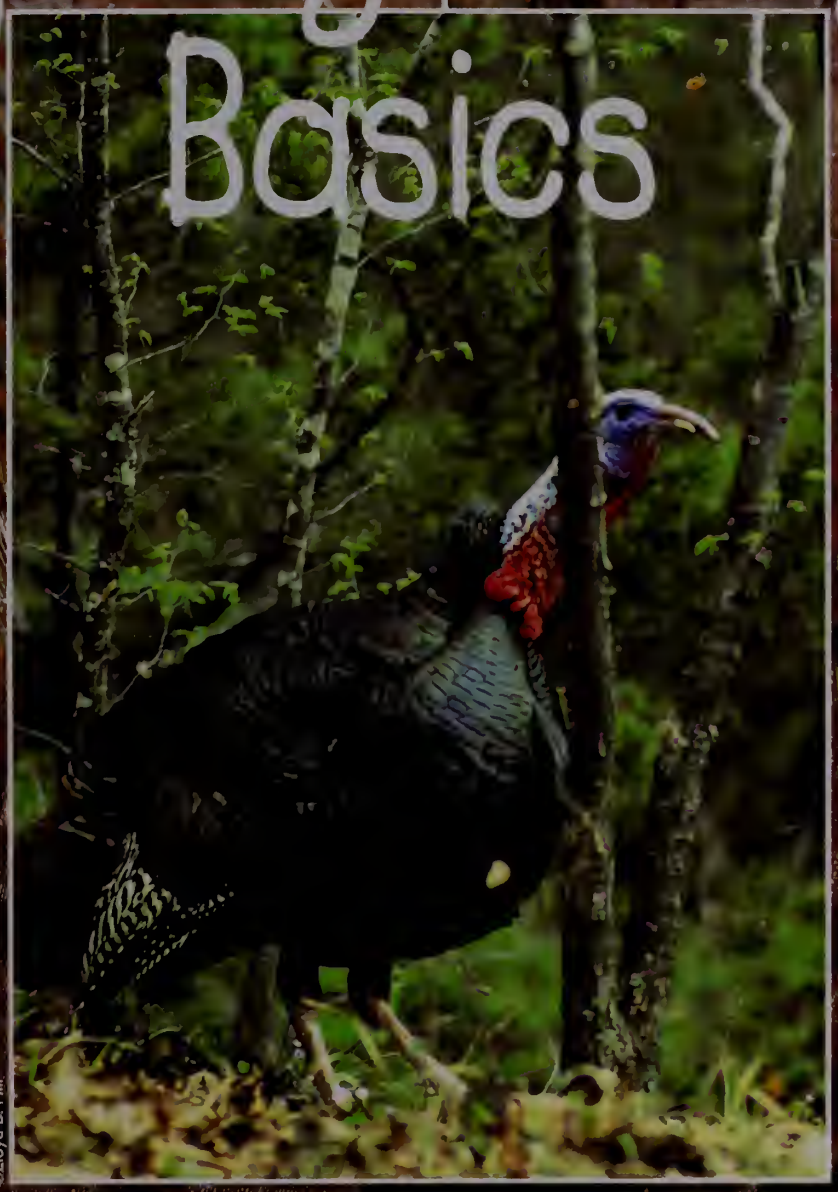


Spring Turkey Basics



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Management, Hunting, and Trivia

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Hunters will tell you, to successfully call in a wild turkey one must put his or her senses to the test. For many making the slightest movement or failing to see and hear an approaching bird can make all the difference.

by Tom Barnett

Thank goodness Ben Franklin lost at least one debate. He wanted the wild turkey to be our national emblem. If Ben Franklin's desires had materialized, wild turkeys would not be candidates for table fare par excellence.

Turkey and many other game populations were low by the early 1900s. The first laws passed by legislation protecting turkeys were in 1912, just prior to the creation of the Game Department in 1916. Virginia began regulating hunting of wild turkeys in 1912. The initial restocking efforts of pen-reared birds was ineffective. An effective wildlife department wild turkey restocking program began by 1954.

Management

There are numerous non-constant variables that cannot be regulated. Wildlife biologists cannot control drought, unusually wet spring weather, or the failure of the mast crop food source. Regretfully, poaching of our wild turkeys also accounts for a large number of illegally harvested birds.

Turkeys have to range further to find food during years of poor mast crops. The additional ranging exposure to hunters increases the fall harvest. The survival rate for turkeys not harvested by hunting may also be reduced due to scarcity of food.

Turkeys are vulnerable to many predators. Turkey nests are vulnerable to skunks, raccoons, opossums, snakes, etc. Poults die from exposure during prolonged wet periods. Young turkeys are inviting meals for foxes, bobcats, hawks, owls, and a growing number of coyotes in Virginia. John M. McDaniels, who authored, *The Turkey Hunter's Handbook*, stated he had witnessed adult turkeys being attacked by hawks.

Turkeys are present throughout most of rural Virginia. Some counties where deer hunting habitat is great do not have as many turkeys. Other counties with smaller deer herds have some of the better turkey populations. Some counties' habitats are ideal for both turkeys and deer.

Harvest data collected by the Virginia Department of Game and Inland Fisheries (VDGIF) may be reviewed from two perspectives: The total number of gobblers harvested per county; and the total gobblers harvested per square mile. Large counties usually have higher totals than smaller counties. Some smaller counties, particularly in the Northern Neck of Virginia, (spring) harvest many more birds per square mile. The higher density of birds per square mile offers the hunter greater opportunities. Northumberland County has the highest density of harvest, yet, is a fraction of the size of Bedford, Franklin, or Botetourt

counties. All four counties are on both listings.

The regrowth of the Commonwealth's turkey population is evident in the historical harvest data, During the 1960–1961 spring season, hunters bagged and checked-in 129 gobblers. The 1970–1971 spring season harvest was 2,252. By 1980–1981, the total increased to 4,924.

Concentrated management of the turkey resource is spearheaded through the efforts of the Wildlife Division biologist who is the Wild Turkey Project Leader. Through past achievements, and recently under Gary Norman's tenure, the management of turkeys has achieved a marvelous resurgence. The spring harvest has more than doubled that of 10 years ago. The 1997 statewide total was 13,236 birds, whereas 1987s spring harvest was 5,835. Gobblers harvested in 1997 east of the Blue Ridge accounted for 8,208 birds, and the west of the Blue Ridge total was 5,028.

Dwight Dyke

Wildlife Biologist and Wild Turkey Project Leader, Gary Norman, along with numerous volunteers from groups like the Wild Turkey Federation, have worked hard to help increase turkey populations throughout Virginia.

Virginia has one of the longest fall seasons on turkeys in the country. Regulating the fall harvest of turkeys has a significant influence on the remaining stocks available for breeding in the spring. The state's fall firearm turkey season is a two week period of late October through early November. The second leg of the season is open in about two thirds of the state. It runs from early December through the first Saturday of January. There are still a few counties where the season remains closed.

Regulating the closure of the middle weeks began in 1993. The first year this management technique was employed increased the 1996–1997 turkey harvest by 6 percent. Increases are expected in the range of 10 to 15 percent using this management philosophy. Gary Norman, also indicates that the spring gobbler harvest is our best index to turkey populations.

Successful turkey hunters are asked to provide turkey wing feathers and breast feather samples to game check stations. About 7,000 were collected last year. The bird's sex and age can be determined. Ratios of juveniles in the harvest are used to indicate reproductive success from the feather samples. Juveniles are the result of the previous spring's "hatch." The Wildlife Division uses the spring gobbler harvest data to estimate population trends and densities. The higher survival rates from the six-week fall season indicate increased turkey populations statewide.

The continued growth of the turkey population is expected. Virginia turkey hunters will continue to experience improved opportunities for bagging their turkey.

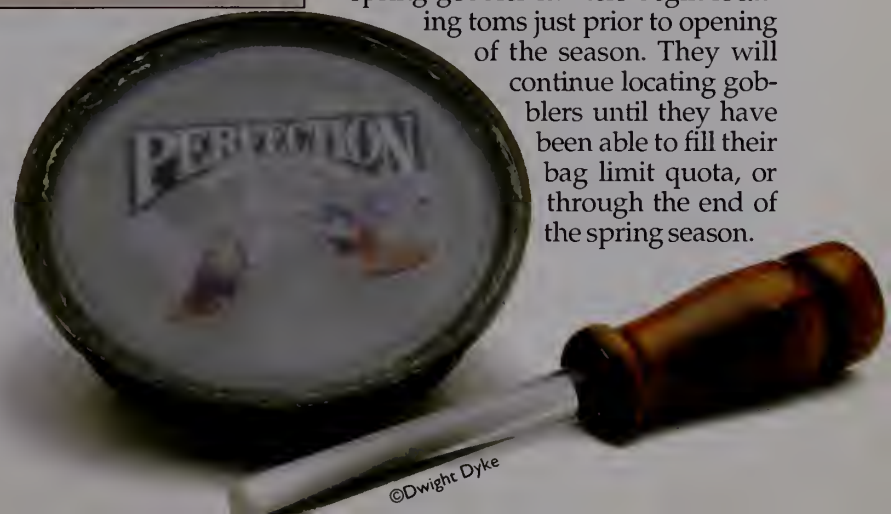
Top 20 Counties Spring Gobbler Harvest Totals for 1997

County	Total Spring Gobblers Harvested
1. Bedford	484
2. Franklin	376
3. Botetourt	332
4. Scott	291
5. Grayson	275
6. Rockbridge	262
7. Pittsylvania	252
8. Buchanan	250
9. Augusta	243
10. Allegany	236
11. Northumberland	227
12. Halifax	225
13. Southampton	221
14. Sussex	220
15. Bath	209
16. Rockingham	209
17. Surry	203
18. Floyd	202
19. Caroline	191
20. Amelia	189

Hunting

Bagging a wild turkey is not as easy as one might think. The statewide spring gobbler harvest averages .53 of a turkey per square mile of habitat! Turkeys need more room to live than many other game birds and animals. Turkeys roam virtually all day looking for food. They walk for many miles, scratching the ground up, and turning over leaves. Underneath, turkeys find grubs, insects, and acorns. Their diet is altered with the seasonal transformation that occurs during the spring hunting season. In warmer weather, turkeys can be found closer to fields instead of deep forests. Two of their favorite foods are acorns, and when warmer, grasshoppers.

The same basic tools are employed to entice amorous gobblers to an artificial hen today as during the Colonial Period. Most dedicated spring gobbler hunters begin locating toms just prior to opening of the season. They will continue locating gobblers until they have been able to fill their bag limit quota, or through the end of the spring season.



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During the first light of the morning, hunters attempt to entice gobblers to "gobble" to determine their presence. A variety of tricks are used. Experienced spring gobbler hunters try to elicit a response from the toms coming off the roost by using owl hoot calls, peacock calls, crow calls, and sometimes even slamming the vehicle's door works. In the early morning damp air, sound travels very well. Most noises from the human population are not as prevalent until later in the morning.

Spring gobbler hunting requires a call that replicates the natural sounds made by a hen. Early calls were yelpers made from hollow wing bones and sometimes cow horns. Box calls evolved that are made from a variety of materials, usually wood. Several decades ago, thin plastic diaphragm calls emerged. These calls are molded to the shape of the roof of the hunter's mouth. Once mastered, the call produced is remarkably similar to natural sounds. Striker calls are another recent invention. Plastic, fiberglass, acrylic, and wood are used. Most of these calls involve using a pointed striker that usually is drawn across the flat face of a rounded call in semi-circle motions. The yelp, yelp, yelp, is imitated, while waiting for a series of gobbles nearby. A turkey hunter imitating a hen has competition from other hunters, or the real thing, a hen. It is difficult to call a tom from the company of a hen. Even gobblers who are not in the company of a hen can be difficult to lure. Older more experienced survivors have frequently been previously shot at, and are more wary. Many hunters use turkey decoys to distract the gobbler's attention away from the hunter's presence, once the gobbler is called in close to the hunter.

The art of concealment is extremely beneficial while hunting turkeys. Turkeys have keen eyesight, see colors, and have an uncanny knack for comprehending the unnatural quickly. Camouflage clothing, head nets, and gloved hands are used by most hunters.

©Tom Barnett

Bob Duncan, VDGIF Wildlife Division Director, is shown here with his 20-pound spring gobbler. He harvested this fine bird in the last minutes of the 1997 season.

A small percentage of hunters is so intent upon bagging these elusive birds, they momentarily neglect proper firearm safety. Camouflaged hunters sometimes become the unintended hunted. Shooting accidents occasionally occur among strangers, and even among family members and friends. Usually, the shooter does not make positive identification of his target. The victim makes some type of movement, and is sprayed with shotgun pellets. Shotguns are the most frequent firearm used while turkey hunting. Use or possession of shot larger than # 2 fine shot during the spring season is illegal. Displaying blaze orange nearby a hunter's location or wrapping blaze orange around a decoy being carried through the woods is defensive hunting. The 1998 spring gobbler season opens April 18 and closes on May 23. ☐

Tom Barnett is an avid hunter and outdoorsman who enjoys sharing his love of nature as a freelance outdoor writer.

Virginia is fortunate to have one of the leading innovators of turkey calls and accessories manufactured in the country. Perfection Turkey Calls is located in Stephenson, Virginia, near Winchester. Perfection Turkey Calls was founded by Jim Clay and Tommy Duval. Both men are avid turkey hunters. They continue seeking avenues of improved turkey hunting products, and field test their innovations before actually marketing the products. Their full range of quality turkey hunting products may be found in the better sporting goods' stores. For more information on their quality products, or your closest dealer, call 1-800-422-YELP!

Turkey enthusiasts may want to consider joining and supporting The National Wild Turkey Federation, Inc. Founded in 1973, it is a nonprofit organization dedicated to the wise conservation and management of the American wild turkey, and its hunting tradition. Membership information may be obtained by contacting the Federation at P.O. Box 530, Edgefield, SC. 29824-00530, or call (803) 637-3106.

Hunters desiring more information for hunting on public property in Virginia may obtain the VDGIF, "Hunting Guide." The guide is published around October, and is available at no charge. It explains access and contacts for over 2 million acres of available hunting habitat throughout Virginia. The "Hunting Guide" may be ordered by phone at the main office in Richmond. VDGIF, P.O. Box 11104, Richmond, VA. 23230-1104, or call (804) 367-1000.

VDGIF also offers a booklet, *A Guide To Virginia's Wildlife Management Areas.* The booklet describes and maps all 29 wildlife management areas, totaling over 180,000 acres statewide. The WMA booklet costs $5 (check or money order) by mail, or is free to walk-in visitors at the Richmond or regional offices. Some field offices have copies available. Order in c/o VIB, P.O. Box 27563, Richmond, VA. 23220.

Journal

Caison Named 1997 Game Warden of the Year

Sergeant Michael G. Caison was named 1997 Virginia Department of Game and Inland Fisheries Game Warden of the Year. Sgt. Caison began his career with the agency on March 15, 1976, in Northampton County and has continued his work all up and down the Eastern Shore and in Tidewater Virginia. He "has been an asset to the entire agency," Col. Jeffrey A. Uerz said. "His law enforcement activities naturally receive a priority, but he has helped other divisions whenever the need arose. During his many years of employment with the agency, Sgt. Caison has developed an excellent rapport with both subordinates and supervision. Similarly, he showed his dedication to his community during these 21 years, and earned their respect and that of his peers and supervisors."

Sgt. Caison personally funded the beginning of "Operation Rabbit" in November, 1996, an investigation which involved the illegal sale of rabbits on the Eastern Shore. He was also instrumental during the 1997 elvers (young eels) investigations, locating illegal activity in several work areas and immediately reporting them. Additionally he has assisted in numerous stakeouts, service of search warrants and arrests.

Sgt. Caison coordinated an EMSAT video utilizing EMS and Department of Game and Inland Fisheries, routinely assists with Hunter Education activities, assisted with First Responder instruction and testing for all game wardens, taught boat accident investigation to VMRC officers and was recently appointed a boating instructor for the department.

In his community, Caison is a member and board member of the Cape Charles Rescue Squad, member of the Eastville Volunteer Fire Department, an a wrestling and soccer official for the Virginia High School League, and a member of a host of other service oriented groups.

Uerz said, "Sergeant Caison has a reputation as an excellent law enforcement officer in his community and has gained respect from both the law enforcement and civilian communities. Additionally, he performs many non-enforcement activities that promote the entire agency. He serves as a capable leader in his work area and guides and instructs his subordinates. Despite the variety and number of these activities, Mike still has time to give back to the community. He is an excellent candidate for, and deserving recipient of, the 1997 Game Warden of the Year Award." ☐

Lee Walker

*Sergeant Michael G. Caison (center) was also presented the Virginia 1997 Shikar-Safari Club International "Outstanding Wildlife Officer of the Year" Award. With a worldwide membership, Shikar-Safari International's primary concerns are that of wildlife conservation. A principal purpose for which the Club was organized involves the protection, enhancement and preservation of all wildlife species, by encouraging and promoting the enforcement of conservation laws and regulations, and by other appropriate means. On hand for the presentation were William L. Woodfin, Jr., **(right)** Director of the Virginia Department of Game and Inland Fisheries and Colonel Jeffrey A. Uerz, Chief of Law Enforcement*

Operation Spruce-Up

The fourth annual Operation Spruce-Up, the statewide spring cleaning program that helps keep Virginia beautiful, is scheduled for April 15-May 15.

Operation Spruce-Up is a citizen involvement campaign designed to encourage Virginians of all ages to assume a renewed pride in and responsibility for Virginia's abundant natural resources. Operation Spruce-Up has encouraged thousand of Virginians to give of their time and resources to improve the quality of Virginia's natural resources. The campaign will also encourage stewardship activities in neighborhoods, local parks and facilities such as state parks and wildlife management areas.

The agencies of the Natural Resources Secretariat and other agencies will participate in theses efforts, and the Governor again will honor participants with personal certificates of recognition.

For additional information about Operation Spruce-Up call 1-800-592-5482. To find out how you can get involved with the Virginia Department of Game and Inland Fisheries Operation Spruce-Up projects, contact Charlie Sledd at (804) 367-6481 or by e-mail at **csledd@dgif.state.va.us.** ☐

Photo Tips

by Lynda Richardson

The Secret of "Remote Possibilities"

Back in 1996 I wrote a column for the October issue of *Virginia Wildlife* magazine titled "Remote Possibilities." Since then I have received letters, phone calls, casual inquiries and threats on my life if I didn't divulge the secret of "making one of those things." So grab your tool box, a Radio Shack catalog and let's make an electronic cable release.

To start, you will need the following:

1. One plastic film can, preferably with a flat surfaced top
2. Wire such as household appliance or telephone (a little longer than length desired)
3. Camera Jack (Check for the type your camera uses)
4. Momentary Switch
5. Knife
6. Wire cutters
7. Solder and Soldering Iron

Cable releases are used when it is necessary for hands off firing of a camera. On the average, this happens in low light situations when a slight breeze, the normal pressing of the shutter or even breathing can create enough movement in the camera to ruin a shot. Most people use the "old fashioned" manual releases. These releases consist of a cable with a plunger at one end and a retractable pin at the other. The pin end screws into the shutter release on the camera and the photographer fires the camera by pressing the plunger and the pin pushes the shutter down.

Electronic cable releases work under the same basic principle. A plunger is pressed and the camera is fired but it is now the electronics of the camera which "release" the shutter. Upon pressing the "momentary switch" on an electronic release, the switch completes the electrical trigger circuit powered by the batteries in the camera. When the camera detects the completed circuit, the shutter fires.

There are several advantages to using an electrical release over the traditional cable release. For one, an electrical release imports no motion to the camera whatsoever allowing for the smoothest shutter release possible. The large protruding momentary switch is easier to activate while wearing gloves and can even be customized to fire with a foot pedal. In addition, if you make your own electrical release, you can make it any length and fire a camera from a distance.

©Lynda Richardson

A clear plastic film can lid seats the red buttoned momentary switch which is easily soldered to household appliance wire and snapped into place. The white camera jack on the right is inserted into the camera's shutter release. This jack will fire a Canon F-1 camera.

Though there are physical limits created by the voltage of the camera trigger circuit, the type of wire used, and the length of the wire, in general, you shouldn't have any trouble with a release of 30 feet or less. If you make the release too long, the voltage drop may be enough that the camera will not fire. Worse, the drain on the camera batteries may be so high that they become exhausted unexpectedly. (If you want a cable longer than 30 feet you might need an interface box and that's another "Photo Tips" column)

As for the type of wire, we've used telephone wire and plain household appliance wire. Most any two lead wire will do.

Some cameras, such as the Canon T-90, use three lead wire because one lead is used to activate shutter displays. But don't worry. If you're using the release to trigger a camera 30 feet away, you can't see the shutter display anyway so you don't need the third lead.

Making your electrical release is easy. Simply take a length of two lead wire and strip both ends with a knife. Grab your film can and poke a hole through the top and bottom of the can. Then, take one end of the wire and feed it through the hole at the bottom of the film can. This hole should be just big enough to let the wire through. Tie a small knot in the wire so it won't back out through the hole. The momentary switch will require a somewhat larger hole made in the lid of the film can. Run it's locking nut up so that the switch is held in place. Then, solder each wire lead to a lead on the switch. Poke any extra cable down inside the film can and snap the top on.

To complete your electrical release, solder the leads on the camera jack to the other end of the wire. (For my Canon F-1s, I use a ⅛-inch subminiature jack.) Depending on the type of wire you use, it's length and the type of camera jack required for your camera your new home-made release should cost you no more than $5. Cool, eh? ☐

On The Water

by Kathy Gillikin, Boating Education Instructor

Virginia's Boating Safety Education Program

Each year, the Virginia Department of Game and Inland Fisheries (VDGIF) sponsors nearly 250 boating safety courses. As a result, about 3,000 people successfully complete a nationally approved boating safety course, and an additional number of people are exposed to boating safety issues through group presentations and numerous exhibits annually.

The Virginia Department of Game and Inland Fisheries provides two *free* boating safety courses: Virginia Boating Basics and Personal Watercraft in Virginia. VDGIF also sponsors courses conducted by the U.S. Power Squadrons, the U.S. Coast Guard Auxiliary and the American Canoe Association. The Department keeps the state's records of the graduates of courses approved by the National Association of State Boating Law Administrators (NASBLA). Organizations who offer NASBLA approved courses are requested to forward the names and birthdates of their graduates. This information is used to verify course completion for insurance discounts and for future mandatory education, if necessary.

In addition, the Department is developing learning units on boating safety for various grade levels between preschool and high school. For more information, please contact our Youth Project Coordinator, Angela Higgs, at (804) 261-5984 or on E-mail: ahiggs@dgif.state.va.us.

Virginia Boating Basics Course

Virginia Boating Basics is a *free* 6-8 hour, NASBLA approved, classroom course which covers the basics of boating safety. Topics included in the course are legal requirements, navigation rules, getting underway, accident prevention, general boat information, Virginia laws, weather and other boating safety topics. All instructors are state-certified volunteers with many years of boating experience.

Personal Watercraft in Virginia Course

The Personal Watercraft in Virginia course was developed to focus on the safety of the fast-growing sport of personal watercraft (PWC) operation (Jet Skis, Sea-Doos, WaveRunners, etc.). This new NASBLA approved, classroom course is 6-8 hours in length and is offered *free* to the public. The course covers such topics as legal requirements, navigation rules, getting underway, accident prevention, Virginia laws, weather and other boating safety topics, emphasizing the unique operation of personal watercraft. All instructors are state-certified volunteers with personal watercraft experience, as well as a positive perspective of the sport.

If you are interested in taking a boating safety course, or in becoming a volunteer instructor, please call the Regional Coordinator closest to you for more information.

Greater Richmond
Jim Richardson
(804) 270-4580

South Central Virginia (Roanoke)
Paul Howell
(540) 774-2619

Southwest Virginia (Coeburn)
Bill Perry
(540) 835-9617

Blue Ridge Region (Crozet)
Jim Crosby
(804) 823-2277

Northern Virginia (Springfield)
Jerry Mittelbach
(703) 866-5853

Tidewater Region (Yorktown)
Ev Tucker
(757) 898-8151

Be Responsible, Be Safe...Have Fun! Take a *free* boating safety course provided by the Virginia Department of Game & Inland Fisheries. ☐

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APRIL Afield

by Jack Randolph

There's something exciting and maybe just a little overwhelming about the annual spawning runs of anadromous fish up the tidal rivers. On the West Coast they have their salmon and steelheads. To me, the spawning runs of the Pacific salmon always held a certain poignancy, knowing their journey was a final one, ending in certain death. I remember discussing this with my guide one day as we stood in a clear Alaskan stream. The guide pointed out that after spawning the mature salmon did not die in vain.

"Look at this stream," he said, "It is practically sterile. There is very little here to provide nutrition to the young salmon after they are hatched. When the spawners perish their bodies become nourishment for the stream." Nature, we know, if left to her own devices, wastes nothing.

Although we don't have the leaping salmon of the West, the return of fish from the seas to our tidal streams is no less dramatic. And this is the month they do it.

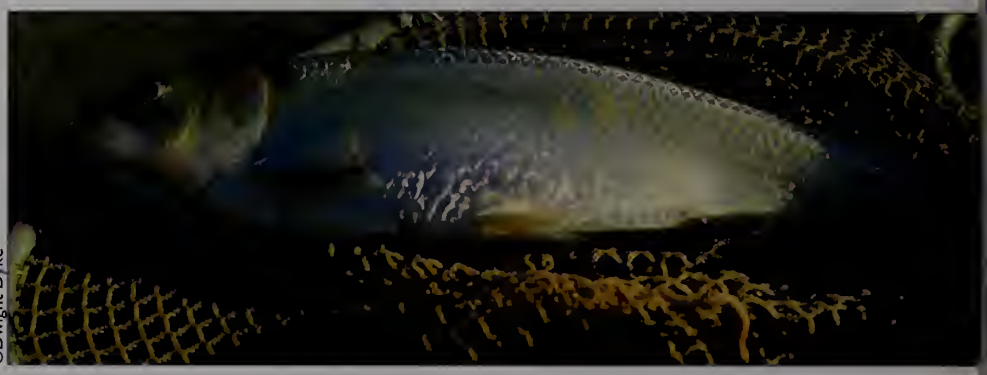
For several weeks now hickory shad, herring and a few white shad have been forging up the Roanoke River in North Carolina. The first week of this month hickory shad, reinforced by legions of herring, should be moving up the tidal waters in Virginia.

The hickory shad should now be at the Route 1 Bridge on the Rappahannock in Fredericksburg. Last year Carl Gentry at Chesley's Tackle Shop in Fredericksburg said the hickory shad run was the best one in years. Apparently the hickories are benefitting from the closed season on American shad which continues in effect in the Chesapeake Bay and all of its tributaries.

Remember, the lower jaw fits inside the upper jaw of a white shad. In the case of the hickory shad, the upper jaw fits inside the lower jaw, somewhat similar to the jaws of pike. The season for white or American shad in the Chesapeake Bay and its tributaries is closed. White shad caught in these waters must be released unharmed.

Last year in early April hickory shad were in the Mattaponi and Pamunkey rivers. They were also in the Potomac River at Fletchers Boat House. And, of course the herring were there, too.

Walkers Dam on the Chickahominy River at Lanexa is the most famous spot in the state for hook and line fishing for herring. Most are caught on plain gold hooks. Last year the herring were hitting gold hooks there during the first week of April.



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April, however, is a month for blacklashes and birdshot. The very popular spring gobbler season opens on the 18th, closing May 23. While this hunt can be one of the most memorable of a lifetime, it can be dangerous. Unfortunately, hunting accidents during the spring gobbler hunt have become much too common, not only in Virginia, but nationwide. In Pennsylvania local chapters of the Wild Turkey Federation have placed billboards along rural highways urging spring turkey hunters to be certain of their targets before shooting—and I can do no less. The recent general hunting season has been an exceptionally safe one, so let's keep it that way.

As a rule the trout streams are running a good head of water this month when early rising insects cause even hatchery-raised trout to dimple the surface in pursuit of a tiny flying morsel. The hatchery trucks have been busy for many weeks now and finding fish should not be too difficult. All you have to do for current trout stocking information is call (804) 525-FISH (3474). A new line has been installed this year for the hearing impaired. Call (804) 525-4071/TDD.

Actually, there is so much going on this month we could use up the whole magazine and not cover it. April is a great month for trophy largemouth bass, such as the 14 ½ pounder that came out of Briery Creek Lake last April. One week last April saw five muskies to 25 pounds taken from two lakes; Western Branch and Smith Mountain. During April last year anglers caught a few nice walleyes from the James River in Richmond below the I-95 Bridge and in the tailwaters below Kerr Dam on the Roanoke River. Also, this is the month when landlocked striped bass commence their spawning runs, offering good fishing for them on the Staunton River above Buggs Island Lake all the way to the foot of Leesville Dam.

Of course, on April 15 until the end of May, special regulations go into effect on a part of Smith Mountain Lake to protect the stripers. And last, but certainly not least, are those very popular runs of white perch early in the month in the James below the I-95 Bridge and in the Rappahannock at Fredericksburg. □

Naturally Wild

by Spike Knuth

What's a Flier ?

Prior to moving to Virginia, when I heard the word flier I, of course, thought of someone who flew a plane or a ski-jumper in the Olympics. The sled I used to belly-flop down snowy Buffalo Hill in Milwaukee's old Washington Park in the winters of the 40s was called a Radio Flyer. The first time I saw the fish known as the flier was out of Sussex County's Lake Airfield, during a trap-netting sample by Department fisheries biologists. At first glance, it looked like a yellowish-hued bluegill with crappie-like dorsal and anal fins. By this time I had read about fliers and saw photos of it so I knew right away what I was looking at. Had I not had that background, I would have thought that it was some sort of mistake of Nature—a bluegill-crappie hybrid.

The flier does indeed resemble a brassy-colored bluegill with crappie fins. Its scientific name is *Centrarchus macropterus*. Centrarchus means "spine anas" in reference to the many anal spines, and macropterus, means "large fin." It is one of our lesser known members of the sunfish family. Its body is saucer-shaped, more rounded than a bluegill and crappie, with numerous spines on its dorsal and anal fins. There are 7 to 8 spines on the anal fin and 11 to 13 on the dorsal. The large, showy fins make the flier look even more round.

Color-wise, the flier is basically olive-brown to yellow-green or yellow-brown with rows of lateral spots, one on each scale, some dark and some faded, giving it a striped appearance. A dark vertical streak extends down through and below its large eyes. Its cheek and opercle are more bluish-green and it has a dark opercle spot or "ear." The head of the flier is small and it has the turned up crappie-like mouth but smaller like that of a bluegill. Its fins are faintly streaked and spotted with darker colors.

Spike Knuth

The flier is a fish of the tannin-stained, tea-colored waters of swamps, forested river backwaters, creeks and canals, and forested lakes of the Coastal Plain. Here they inhabit the clear, quiet, waters with muddy bottoms and a lot of aquatic vegetation. They are able to live nicely in waters with low pH and in brackish waters with up to seven percent salinity, according to some studies.

Not much is known about its spawning habits, but it likely mimics its sunfish cousins by fanning out nests in the shallows. It is known to spawn a little earlier than other sunfish, beginning as early as late-February and spawning into May, depending on water temperatures. According to lab studies, once the eggs hatch, the males continue to guard the newly-hatched young for awhile.

They are abundant in those waters they inhabit and grow slowly. Some may reach 10 inches and weigh up to a pound. Fliers feed on a variety of tiny crustaceans, both aquatic and terrestrial insects and insect larvae, algae and small fishes. Despite the dark waters they live in, they have a fine flavor.

In Virginia, it is found mainly in the southeastern part of the state, but is found as far north as the upper Rappahannock River. It also inhabits the backwaters of the Pamunkey and Mattaponi. Motts Run Reservoir near Fredericksburg has fliers and it is especially abundant in waters like Lake Drummond in the Dismal Swamp, the canals in and around the swamp, and in lakes Airfield, Meade, Cohoon and Kilby. Its range covers from Maryland south through some Gulf States and up the southern Mississippi Valley to southern Illinois.

RECIPES

by Jone Cone

A Spring Bass Dinner

State biologists recommend that you release small bass and keep an occasional large fish for eating. The reason for this is that small bass reproduce more efficiently.

Largemouths and smallmouths taste the same. Both should be filleted and then skinned for the best flavor and to eliminate bones. You will find bass are mild, firm and easy to prepare.

Menu

Bass Fillets In Lemon Sauce
Creamed Corn Casserole
Green Bean And Mozzarella Cheese Salad
Time-Saving Yeast Rolls
Key Lime Pie

Bass Fillets in Lemon Sauce

1 pound bass fillets
½ cup chopped green onions
2 tablespoons chopped fresh parsley
Pepper to taste
Dash turmeric
1 can (10 ½ ounces) ready to serve low sodium chicken broth
2 tablespoons lemon juice
1 tablespoon cornstarch

In a 12-inch skillet, arrange fish. Sprinkle with green onions, parsley, pepper and turmeric. Reserve ¼ cup of the broth. Pour remaining broth and lemon juice over fish. Over medium heat, heat fish to boiling. Reduce heat to low. Cover and simmer 10 minutes or until fish flakes easily when tested with a fork. With slotted spoon, remove fish to serving platter and keep warm. In a cup, blend ¼ cup broth with cornstarch until smooth. Gradually stir into hot broth in skillet. Cook over medium heat until mixture boils and thickens, stirring constantly. Serve with fish. Makes 4 servings.

Creamed Corn Casserole

2 cans (17 ounces each) cream style corn
1 cup Minute rice, uncooked
1 egg slightly beaten
Salt and pepper to taste
⅛ teaspoon ground nutmeg

Preheat oven to 375°. Combine all ingredients in a large bowl and mix well. Pour into a greased 9-inch square baking dish. Bake at 375° for 25 to 30 minutes or until liquid is absorbed. Serves 6.

Green Bean and Mozzarella Cheese Salad

2 cups fresh green beans cooked and drained
6 plum tomatoes, sliced
1 package (8 ounces) mozzarella cheese, cut into ½-inch cubes
⅓ cup chopped fresh basil
⅓ cup prepared Italian or Zesty Italian salad dressing

Place beans, tomatoes, cheese and basil in a large bowl. Pour dressing over bean mixture. Refrigerate at least 1 hour to marinate. Serves 4.

Time Saving Yeast Rolls

2 envelopes active dry yeast
¼ cup warm water
1 ½ cups buttermilk, heated
½ cup sugar
½ cup oil
1 teaspoon salt
4 ½ cups flour
½ teaspoon baking soda

Dissolve yeast in water. Combine buttermilk, sugar, oil and salt. Sift flour and baking soda into a large bowl. Mix yeast and buttermilk mixture and add to flour; mix well. Let dough stand for 10 minutes. Shape as desired and place in muffin pans brushed with melted butter. Turn to butter tops and let rise for 30 minutes. Preheat oven to 425°. Bake 10 to 12 minutes. Makes 3 dozen.

Key Lime Pie

4 ounces cream cheese, softened
1 tablespoon milk
1 tablespoon sugar
2 teaspoons lime juice
1 tub (8 ounces) whipped topping, thawed
1 (6 ounce) prepared graham cracker crumb crust
2 cups cold milk
2 packages (4-serving size) vanilla instant pudding and pie filling
2 teaspoons grated lime peel

Mix cream cheese, 1 tablespoon milk, sugar and lime juice in large bowl with wire whisk until smooth. Gently stir in 1½ cups of the whipped topping. Spread on bottom crust. Pour 2 cups milk into a large bowl. Add pudding mixes and lime peel. Beat with wire whisk 1 minute. (Mixture will be thick.) Immediately stir in remaining whipped topping. Spread over cream cheese layer. Refrigerate 4 hours or until set. Garnish with additional whipped topping and lime slices if desired. Store leftover pie in refrigerator. Serves 8. ☐

Dwight Dyke

Sergeant Mike Caison assists the Cape Charles volunteer rescue squad in Northampton County on Virginia's Eastern Shore.

Game Wardens are Helping to Support the Very Fabric of Virginia's Local Communities

Sergeant Michael G. Caison (right) of Northampton County finds that his services as a Virginia Game Warden often take him beyond his normal call of duty. Like many game wardens who serve in small communities, his extensive training in everything from water safety, to medical emergencies go far into helping to support his local community. As the public will often see and learn, the cooperation and support by all in a community make it a home.